

Abstract of the Disclosure

An input complex base band signal $x(t)$ is complex-multiplied by a distortion compensation coefficient $h(p)$, quadrature-modulated by a quadrature modulator QMOD, and input into a power amplifier AMP. A part of the output from the power amplifier AMP is input into a band pass filter BPF, the band pass filter BPF extracts an adjacent channel leakage power band, and a power detector detects an adjacent channel leakage power value. A distortion compensation coefficient arithmetic unit GA using a genetic algorithm computes a distortion compensation coefficient based on an adjacent channel leakage power value or an adjacent channel leakage power ratio and an input complex base band signal $x(t)$, and outputs a distortion compensation coefficient $h(p)$ as a function of a power value p of the input complex base band signal.